

Card 1/1

APPROVED FOR RELEASE: 03/20/2001

CIA-RDP

USSR/Virology - The Virus of Foot-and-Mouth Disease.  
Abs Jour : Ref Zhur - Biol., No 19, 1958, 85834.  
Trust : Ivanov, S.P.  
Title : Kirgiz Scientific Research Institute of Animal Husbandry  
Orig Pub : Byul. Nauchno-Tekhn. Inform. Kirg. N.-I. In-t Zhivotnovo-  
dstva i Veterinarii, 1958, No 1, 47-48.  
Abstract : A vaccine was prepared from a virus passed in young rabbits.  
E.



IVANOV, S.N.

Discussing some recent problems of the formation of pyrite deposits  
in the Urals. Trudy Gor.-geol. inst. UFAN SSSR no.43:7-77 '59.  
(Ural Mountains--Pyrites) (MIRA 13:11)

IVANOV, S.P., starshiy nauchnyy sotrudnik

Differentiated mounting of saws on the gin. Tekst.prom. 19  
no.4:22-26 Ap '59. (MIRA 12:6)

1. TSentral'nyy nauchno-issledovatel'skiy institut khlopkovoy  
promyshlennosti.  
(Cotton gins and ginning)

LATYSH, Ivan Korneyevich; IVANOV, S.N., doktor geol.-min.nauk, prof.,  
otv.red.; KBERGARDT, M.S., red.izd-va; SEREZHINA, N.F., tekhn.  
red.

[Mineral composition and conditions governing the deposition  
of titanomagnetite ores of the Visim deposit in the Central  
Urals] Mineral'n'yi sostav i uslovia lokalizatsii titanomag-  
netitovykh rud Visimskogo mestorozhdenia na Srednem Urale.  
Sverdlovsk, 1960. 75 p. (Akademiia nauk SSSR. Ural'skii filial.  
Sverdlovsk. Gorno-geologicheskii institut. Trudy, no.50).  
(MIRA 13:7)

1. Zaveduyushchiiy laboratoriyey geologii rudnykh mestorozhde-  
niy Ural'skogo filiala AN SSSR (for Ivanov).  
(Bilimbay Mountain—Titanomagnetite)

IVANOV, S.N.

Nomenclature of effusive rocks. Izv. AN SSSR. Ser. geol. 25 no.7:  
100-104 J1 '60. (MIRA 13:10)

(Rocks, Igneous--Nomenclature)

IVANOV, S.N.; KURITSINA, G.A.; GLEBOVSKAYA, Ye.A.

Bitumen in pyrite ores and ore-bearing rocks of the Urals. Geokhimiia  
no. 3:268-273 '61. (MIRA 14:4)

1. Gorno-geologicheskii institut Ural'skogo filiala AN SSSR,  
Sverdlovsk.

(Ural Mountains—Bitumen)

IVANOV, S. N.

(18)

Baku, 18-23 Sept 1962  
 Regularities in the Formation and Distribution of Endogenous  
 Mineral Resource Deposits,  
 The Third All-Union Conference on...  
 8/011/63/000/001/002/002  
 A006/A101

Group 2 included reports on--  
 endogenous deposits in other synclinal regions, such as mercury formations in  
 Siberia and the Far East (V. A. Kuznetsov), pyrite deposits in the Ural (S. N.  
 Ivanov), Kimeridgian and Alpine metallogeny in Uzbekistan (I. Kh. Khamrabayev);  
 ore region types in the Pacific area (Ye. A. Radkevich); metallogeny in Tadzhik-  
 istan (K. I. Litvinenko); hydrothermally transformed rocks in the Trans-Carpa-  
 thian region (M. Yu. Fishkin) peculiarities in magmatism and metallogeny of the  
 Mountaneous Crimea (V. I. Lebedinskiy), antimony-mercury fields (M. A. Karasik)  
 and others. Group 3 included reports on the classification of metallogenous zones  
 and provinces of the Earth crust (D. I. Gorzhevskiy); classification of metallo-  
 genous zone types of the Earth crust (V. N. Kozarenko); classification of mag-  
 matogenous non-metallic mineral resources as a basis of prognoses and prospecting  
 (V. P. Petrov); types of metallogenous provinces in synclinal regions of the  
 USSR (A. I. Semenov); principles of geological zoning on the example of Central  
 Asia (K. L. Babayev); comparative characteristics of metallogeny in Malyi Caucasus  
 and the Kamchatka-Koryak zone (I. G. Magak'yan), some particularities of metallo-  
 geny in the Mediterranean geosynclinal region (G. A. Tvalchrelidze); rootless  
 plutons and some peculiarities in the magmatism of moving zones (A. P. Lebedev);  
 paragenetic ore complexes (P. S. Saakyan) the part of deep-lying breaks in  
 metallogeny of syncline regions on the example of the Caucasus (E. Sh. Shikhal-  
 beyli). The closing report was read by A. V. Sidorenko, Minister of Geology and  
 Preservation of Mineral Resources of the USSR.

Izvestiya Ak nauk SSSR, Seriya Geologicheskaya, No. 1, 1963, pp 126-128



IVANOV, S.N.

Factors in the location of pyrite deposits in geosyncline systems  
and their representation on metallogenic maps as exemplified by  
the Urals. Trudy Gor.-geol.inst. UFAN SSSR no.58:111-127 '62.  
(MIRA 15:12)

(Ural Mountains--Pyrites)

IVANOV, S.N.; PROKIN, V.A.; DOIMATOV, G.K.

Nature of ore-bearing brachyanticlinal uplifts in the Urals.  
Trudy Gor.-geol.inst. UFAN SSSR no.58:129-153 '62. (MIRA 15:12)  
(Ural Mountains—Pyrites) (Geology, Structural)

IVANOV, S.N.; KHAPKINA, Z.A.

Effect of various methods of introducing the superphosphate and  
humus mixture on the assimilation of phosphorus by corn. Dokl.  
AN BSSR 7 no.7:485-487 J1 '63. (MIRA 16:10)

1. Belorusskiy nauchno-issledovatel'skiy institut pozhvovedeniya  
Ministerstva sel'skogo khozyaystva BSSR.

IVANOV, S.N.

Some characteristics of basaltoid metallogeny in the Ural Mountains.  
Zakonom.razm.polezn.iskop. 7:317-329 '64. (MIRA 17:6)

1. Institut geologii Ural'skogo filiala AN SSSR.

ACCESSION NR: AT4035457

S/2914/62/000/075/0049/0065

AUTHOR: Ivanov, S. N.

TITLE: Running tests of the diesel ship "Geokchay", equipped with adjustable-pitch screws (APS)

SOURCE: Leningrad. Tsentral'nyy nauchno-issledovatel'skiy institut morskogo flota. Informatsionnyy sbornik, no. 75, 1962. Tekhnicheskaya ekspluatatsiya morskogo flota (Technical operation of the merchant marine), 49-65

TOPIC TAGS: diesel ship, screw, adjustable pitch screw, twin screw vessel, freighter

ABSTRACT: In the first part of the article, the basic characteristics of the vessel and of its engine and propeller units are described. The diesel ship "Geokchay" is a single-deck twin-screw vessel with a superstructure in the stern, constructed according to the same plan as other vessels of the "Baku" type. It carries two type 8DR30/50M-4 engines of 1000 h.p. each at  $n = 340$  rpm. The rated mean effective pressure in the cylinders  $P_{eff} = 4.68$  kg/cm<sup>2</sup>; combustion pressure  $p_z = 65$  kg/cm<sup>2</sup>; exhaust gas temperature  $t_{ex} = 310$ C. The engines are practically non-reversible as a consequence of the design features of the adjustable-pitch screw units. The latter are of Soviet design and were

Card 1/8

ACCESSION NR: AT4035457

manufactured at the Mashinostroitel'nyy zavod im. A. A. Zhdanova (A. A. Zhdanov Machine Building Plant) at Izhorsk. These units contain (See Figure 1 in the Enclosure): a) reversible adjustable-pitch screws; b) shaft ducts; c) APS drives; d) systems for remote drive control and APS pitch indication. The specifications of the screws are given. Within the cavity of the boss 1 (See Figure 2 in the Enclosure) there is a pitch changing mechanism or blade turning mechanism (abbreviated BTM) of the crankgear type with screw pair, consisting of crankshaft rings 2, piston rods 3, adjusting slide 4, washer 5, lead screw 6, guide flange 7 and step bearing (thrust bearing) 8. The operational principle of the blade turning mechanism is outlined. The APS drive is electromechanical and converts the energy of the electric motor into the force required to operate the blade turning mechanism. It is described in detail in the article. The pitch indication system operates according to the self-synchronizing principle and employs selsyns. The drive, its control system and the pitch indication system permit the blades to be turned both with the screw shaft rotating or at rest. The vessel was tested from the 24th through the 30th of December during a voyage from Baku to Krasnovodsk and back again. The ship ran under a cargo of grain with an average draught of 4.1 meters. During this time, with a sea of not more

Card 2/8

ACCESSION NR: AT4035457

than 3 units and wind of less than 5 units (in the initial period) and then with a sea of not more than 1 - 2 units and a wind of 1.5 - 2 units, deep-water running, inertia, maneuvering and response ("control ability") tests were made. During these trials the following values were measured and recorded: ship speed, blade setting angle, screw revolutions, engine fuel consumption, wind velocity and direction, water and air temperature, water depth under the keel, draught of the vessel, path and time of braking of the vessel while maneuvering. The results of all these tests are discussed and analyzed in the article. The basic conclusions are as follows: 1. The APS permit any ship speeds from zero to the maximum possible speed at a given draught and are not inferior in this respect to the fixed-pitch screws of the "Baku" and other vessels. 2. Comparative data for specific fuel consumption per horsepower indicate that the APS provide considerably improved engine operating conditions. 3. The APS not only result in an economizing of fuel, but also provide an increase in engine capability reserve due to operation at more favorable revolution rates, with better fuel combustion and at higher screw efficiency. 4. Because of the APS the engines of the "Geokchay" operate as irreversible -- a fact which will certainly make for longer lifetime and reduced expenditures for repairs. 5. While the economic advantages derived through the use of APS are already apparent, quantitative

Card 3/8

ACCESSION NR: AT4035457

evaluation will be possible only after continued operation of the vessel. 6. The "Geokchay" has practically the same inertia characteristics as vessels of the same type fitted out with fixed-pitch screws. 7) The information obtained with respect to the length of time of braking (deceleration) when maneuvering the diesel ship "Geokchay" cannot be regarded as completely satisfactory. 8. In deep water the vessel has the same general circulation characteristics as vessels of the same type with fixed-pitch screws. 9. From 14 to 17 minutes are required to turn the vessel 360° in deep water; that is, practically the same length of time required for a full turn by ships with fixed-pitch screws. 10. In shallow water, such a 360°-turn requires 24 - 30 minutes. Certain other considerations of lesser importance are also discussed by the author. Orig. art. has 5 tables and 6 figures.

ASSOCIATION: Tsentral'ny'y nauchno-issledovatel'skiy institut morskogo flota,  
Leningrad (Central Scientific Research Institute of the Merchant Marine)

SUBMITTED: 00

DATE ACQ: 25May64

ENCL: 04

SUB CODE: PR

NO REF SOV: 003

OTHER: 000

Cord 4/8



ACCESSION NR: AT4036457

ENCLOSURE: 01

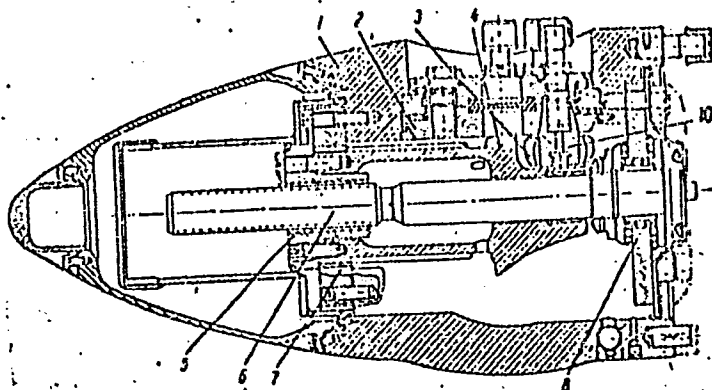


Figure 1. Propeller units of the diesel ship "Geokchay"

1 - reversible electric motor

Card 5/8

ACCESSION NR: AT4035457

ENCLOSURE: 03

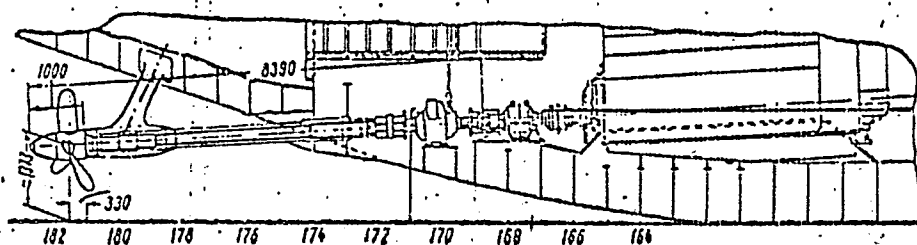
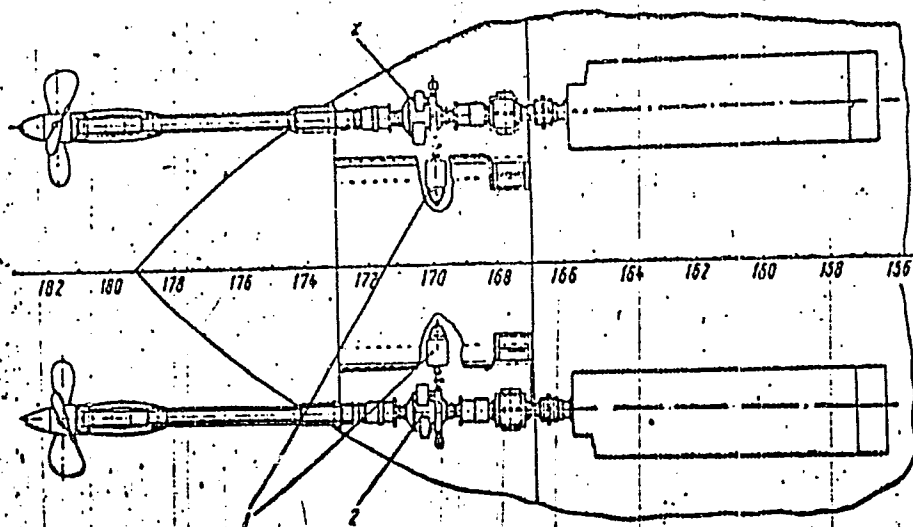


Figure 2. Screw boss  
a) longitudinal section

Card 7/8

ACCESSION NR: AT4035457

ENCLOSURE: 04



Card 8/8

b) cross section

IVANOV, S.N.; SKVORTSOVA, N.Ye.; SOKOLOV, Yu.F.

Frequency characteristics of reverse voltage germanium diodes with  
welded contacts. Radiotekh. i elektron. 6 no.12:2028-2035 D  
'61. (MIRA 14:11)

(Germanium diodes)

L 12642-63

BDS

ACCESSION NR: AT3002998

5/2927/62/000/000/0145/0152

AUTHOR: Ivanov, S. N.; Skvortsova, N. Ye.; Sokolov, Yu. F.

TITLE: Reverse-bias frequency characteristics of welded-contact germanium diodes  
[Report of the All-Union Conference on Semiconductor Devices held in Tashkent from  
2 to 7 October 1961]

SOURCE: Elektronno-dy\*rochny\*ye perekhody\* v poluprovodnikakh, Tashkent, Izd-vo  
AN UzSSR, 1962, 145-152

TOPIC TAGS: germanium diode, welded-contact germanium diode

ABSTRACT: Effect of superhigh frequency (SHF) on the series equivalent resistance and other characteristics of Ge diodes was determined experimentally. Two kinds of n-type Ge diodes were tested: (1) with a welded contact and (2) with an "ohmic" contact. Three methods of determining the series equivalent resistance at SHF are discussed: (1) from ohmic-contact test, (2) by extrapolation, and, (3) by measuring capacitance. Measurements were made at 0.59x, 1.23x, 1.94x, and 5.9x10 sup 10 cps. Barrier-layer capacitance and leakage resistance were measured as a function of the reverse bias voltage at 7 frequencies, from 3 x 10 sup 9 to 6 x 10 sup 10 cps. Loss resistance was measured at (a) frequencies up to 5 x 10 sup 10 cps and (b) reverse bias voltages up to 2 v. In conclusion, an explanation based on the above

Card 1/2

L 12642-63  
ACCESSION NR: AT3002998

measurements is offered of the fact that the series equivalent resistance depends on frequency in the SHF band. Orig. art. has: 6 figures and 9 formulas.

ASSOCIATION: Akademiya nauk SSSR (Academy of Sciences SSSR) Akademiya nauk  
Uzbekskoy SSR (Academy of Sciences UzSSR) Tashkentskiy gosudarstvennyy  
universitet (Tashkent State University)

SUBMITTED: 00

DATE ACQ: 15May63

ENCL: 00

SUB CODE: 00

NO REF SOV: 006

OTHER: 005

Card 2/2

IVANOV, S.N.

Creation of p-n junctions by an impulse welding technique.  
Radiotekh. i elektron. 8 no.6:1074-1076 Je '63. (MIRA 16:?)  
(Transistors)

IVANOV, Sergey Nikolayevich; PENIN, Nikolay Alekseyevich;  
SKVORTSOVA, Nera Yefimovna; SOKOLOV, Yuriy Fedorovich;  
VOLKOVA, I.M., red.

[Physical principles of the operation of semiconductor  
microwave diodes] Fizicheskie osnovy raboty poluprovod-  
nikovyykh SVCh diodov. [By] S.N.Ivanov i dr. Moskva,  
Sovetskoe radio, 1965. 190 p. (MIRA 18:5)



L 52043-65 EWT(1)/FBD/ENG(v)/EEC-4/BEC(t)/FCS(k) Pa-5/P1a-2/P1-4/P1-6/  
 P1-4 GW/NS-4/WR  
 ACCESSION NR: AT5012802 UR/2504/65/028/000/0011/003R

AUTHOR: Ivanov, A. N., Ilyasov, Yu. P., Khramov, G. N.

TITLE: 3. Wide band irradiator with electrical directivity diagram scanning

SOURCE: AN SSSR. Fizicheskly institut. Trudy, v. 28, 1965. Radioteleskopy (Radio telescopes), 22-38

TOPIC TAGS: wide band irradiator, electrical scanning, directivity diagram scanning, antenna feeder, hybrid coil, eight-vibrator irradiator, radiotelescope

ABSTRACT: The design of the irradiator for the north-south arm of the cross-like FIAN telescope is described. This 1 km long arm is immovable, and a change in the directivity diagram relative to the fixed north-south line can be achieved by altering the phase distribution of the currents along the irradiator elements, i.e., one must introduce electrical scanning of the antenna beam. The paper shows that it is possible, in principle, to design a feeder system which significantly reduces the systematic errors generated in the amplitude-phase distribution along the irradiator during the matching of vibrators with the feeder in the given sector of the directivity diagram scanning. A general theoretical exposition is followed by a discussion of various circuits for electrical scanning, error estimates, an outline of the N-S irradiator circuit, and a detailed description of its feeder system.  
 Card 1/2

L 52043-65

ACCESSION NO. A11012801

The results of the studies of the wide band properties of the fender circuits, hybrid coils, and symmetrizing elements with a 4:1 transformation ratio are shown to-  
 gether with the results of the studies of the properties of the circuits with a 4:1  
 transformation ratio. The authors show that the fender circuits are the most effective  
 in the case of a 4:1 transformation ratio. The authors also show that the fender circuits are the most effective  
 in the case of a 4:1 transformation ratio.

ASSOCIATION: Fizicheskii institut im. P. N. Lebedeva Akademii nauk SSSR (Physics  
 Institute of the Academy of Sciences, SSSR)

SUBMITTED: 00

ENCL: 00

SUB CODE: EC, AA

NO REF SOV: 004

OTHER: 008

*me*  
 Card 2/2

BELOVA, N.A.; IVANOV, S.N.

Study of the properties of low-resistance germanium base.  
Radiotekhnika i elektronika, 10 no.1:96-101 Jan 1965.

(U.S. 18:2)

L 12069-66 EWT(1)/T/EWP(k)/EWA(h) IJP(c) AT

ACC NR: AF5021483

SOURCE CODE: UR/0046/65/011/003/0398/0399

AUTHOR: <sup>44 55</sup> Ivanov, S. N.; <sup>44 55</sup> Skvortsova, N. Ye.; <sup>44 55</sup> Stepanov, B. G. <sup>69</sup>ORG: <sup>44</sup> Institute of Radio Engineering and Electronics AN SSSR (Institut radiotekhniki i elektroniki AN SSSR)TITLE: <sup>21, 44, 55</sup> Investigation of GaAs p-n junctions operating as converters of ultrasonic oscillations into electric oscillations

SOURCE: Akusticheskiy zhurnal, v. 11, no. 3, 1965, 398-399

TOPIC TAGS: gallium arsenide, semiconductor diode, pn junction, acoustoelectric transducer, ultrasonics, frequency dependence

ABSTRACT: The authors investigated the performance of GaAs diodes to determine the effect of the geometric dimensions of the base on the efficiency of such a diode as an ultrasonic transducer. This influence can be investigated by varying in definite fashion the relation between the thickness of the base and the wavelength of the applied ultrasonic oscillations, and observing the frequency dependence of the conversion efficiency. The measurements were made at frequencies for which the wavelength was approximately equal to the base thickness. The diodes were prepared by diffusion of zinc in n-type GaAs plates and tested by applying rectangular ultrasonic pulses to the investigated diode through an ultrasonic delay line (Fig. 1). The output-signal voltage was found to exhibit a definite dependence on the frequency of the ultrasonic oscillations. The transformed signal had a maximum when the thickness  $d$  of the diode

Card 1/2

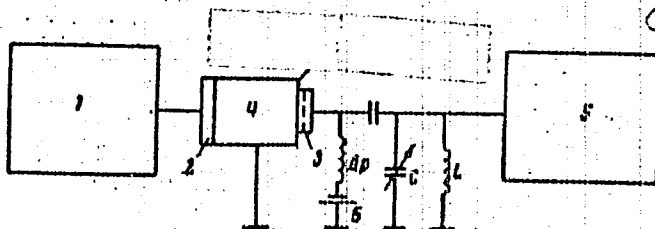
UDC: 534.232  
2

I. 12069-66

ACC NR: AP5021483

Fig. 1. Diagram of test setup.

1 - Pulse generator, 2 - quartz plate, 3 - tested diode, 4 - delay line (10 microseconds), 5 - oscilloscope



base region was connected with the wavelength  $\lambda$  by the relation  $d \approx \lambda(2n + 1)/4$  ( $n = 0, 1, 2, \dots$ ). In the experiments  $d$  was equal to  $1.7 \times 10^{-1}$  cm, making it possible to observe in the 7--14 Mcs range up to six frequencies corresponding to the maximum of the converted signal. This relation is similar to that of a compound vibrator, and it is shown on the basis of several other properties that the model of the compound vibrator can be used for the analysis of the performance of an electro-acoustic diode transducer. The conversion efficiency depends on the choice of the geometrical dimensions of the diode. Orig. art. has: 2 figures and 5 formulas.

SUB CODE: 20/ SUBM DATE: 06Jul64/ ORIG REF: 001/ OTH REF: 006

Card 2/2

L 16036-66 EWT(m)/EWP(j) RM

ACC NR: AP5023878

(A)

SOURCE CODE: UR/0329/65/000/008/0003/0006

AUTHOR: Ivanov, S. N. (Dr. of Technical Sciences); Laptev, L. N. (Engr.)

27

ORG: Leningrad Academy of Wood Technology im. S. M. Kirov (Leningrad-lesnaya  
skaya lesotekhnicheskaya akademiya) S. M. Kirova.

B

TITLE: Influence of humidity on the mechanical properties of paper<sup>15, 44</sup>

SOURCE: Bumazhnaya promyshlennost', no. 8, 1965, 3-6

TOPIC TAGS: paper industry, moisture measurement, solid mechanical property,  
tensile strength, etc.

ABSTRACT: The influence of humidity on the folding endurance of papers was investigated in the Pulp-Paper Production Laboratory of the Leningrad Academy of Wood Technology imeni Kirov. Samples of laboratory production paper were conditioned for four days in dryers at an air humidity of 5, 15, 35, 65, and 95%, up to a constant balanced humidity. After this the tensile strength, the folding

Card 1/4

UDC: 676.017

L 16036-66

ACC NR: AP5023878

endurance, and the tear factor were determined at the same rate of humidity, or very near to it. The table shows the results.

1. Pulp; 2. degree of beating, Shopper Riegler; 3. folding endurance at air humidity, %; 4. sulfite unbleached; 5. bleached 6. sulfate unbleached; 7. bleached

1 Целлюлоза	2 Степень раз- мола, °ШР	3 Сопротивление излому при относи- тельной влажности воздуха, %					
		5	15	35	65	85	95
Сульфитная; 4- небеленая . . . . .	15 25 35 50	3 28 24 59	3 21 31 106	2,5 10 34 212	2 18 78 255	1 — 64 201	1 12 14 143
5 беленая . . . . .	15 25 35 50	2,5 25 34 123	2 28 28 195	2 43 51 110	1 40 43 266	1 27 35 110	1 9 21 76
6 Сульфатная небеленая . .	15 25 35 50	17 350 200 420	17 430 353 620	13 180 165 650	11 1050 1140 1350	5 700 2040 5640	2 330 3015 7840
7 Хлопковая беленая . . . . .	25 35 50	18 250 236	68 152 108	83 307 380	46 132 320	24 48 153	10 23 96

Table 1.

Card 2/4

L 16036-66

ACC NR: AP5023878

Figure 1 shows the diagrams of the influence of air humidity on the folding endurance of different samples of industrial production paper.

1. Deep printing paper;
2. electrolytic;
3. drawing pergamin;
4. base for paraffin;
5. monotypic;
6. drawing transparent.



Figure 1. Influence of humidity on the folding endurance of industrial production paper.

Card 3/4



L 16036 66

ACC NR: AF5023878

The main factors defining the behavior of paper while the humidity was modified were the fiber bond strength, the pliability, and the plasticity of fibers. The tensile strength of paper was always progressively reduced with an increase in humidity, while the folding endurance and tear factor could be reduced or increased depending on the fiber bond strength. The influence of humidity on the mechanical properties of paper was primarily associated with the destruction of the hydrogenous fiber bond. The folding endurance changed differently with increased humidity, depending on the fiber bond strength and the paper strength. The endurance of paper without strength decreased continuously with increasing humidity. Stronger paper showed an increase in the beginning, reaching its maximum at some optimal humidity. With further increase in humidity it started to decrease progressively. The stronger the paper the greater the maximum shift toward greater humidity. The paper tear factor followed the same rule as folding endurance, however the influence of humidity was smaller. Tensile strength decreased progressively with increase in humidity, and was particularly high in the zone of high humidity. The usefulness of correction factors for the conversion of tensile strength to normal humidity was established. Orig. art. has: 6 figures and 1 table.

SUB CODE: 13.07 SUBM DATE: none/ ORIG REF: 002/ OTH REF: 002  
Card 4/4

13974-65 ENT(1)/EEC-4/EEC(t)/EEC(b)-2/FCS(k) Pac-4/Pac-2/P1-4/P3-4/P1-4  
 (S/AFWL/AFETR/ASB(d)/APGC(b)/RAEM(a)/AFTG(b)/RAEM(1)/HSE(c)/ESD(gg)/  
 ACCESSION NR: AP4044107 ESE(t) WR S/0141/64/007/003/0524/0930

AUTHORS: Duplenkov, D. A.; Ivanov, S. N.

TITLE: Radiation from prolate spheroidal antennas

SOURCE: IWUZ. Radiofizika, v. 7, no. 3, 1964, 524-530

TOPIC TAGS: antenna configuration, antenna directivity, antenna pattern, antenna theory, spherical function

ABSTRACT: In view of the increasing use of antennas that can be approximated by oblate spheroids with symmetric excitation, the authors obtain analytic expressions for the excitation of an ideally radiating prolate spheroid by an annular slot with uniform magnetic current distribution. The existing solution of the general problem (G. T. Markov, Radiotekhnika i elektronika v. 2, no. 4, 432, 1957) is difficult to use because of the lack of sufficient tabulation of the spheroidal functions, and the particular solution obtained by

Card 1/2

L 13974-65

ACCESSION NR: AP4044107

Mayer (Trans. IRE, AP-4, 58, 1956) pertains to bodies that are essentially thinner and shorter. The calculations were checked against the experimental results with four antenna models and show satisfactory agreement in all cases. The effect of varying the antenna parameters is discussed briefly. Orig. art. has: 4 Figures.

ASSOCIATION: Moskovskiy energeticheskii institut (Moscow Power Institute)

SUBMITTED: 28Oct63

ENCL: 00

SUB CODE: EC

NO REF SOV: 002

OTHER: 003

Card 2/2

IVANOV, S.N.; ILYASOV, Yu.P.; KHRAMOV, G.N.

Band irradiator with electric scanning of the directional diagram.  
Trudy Fiz. inst. 28:22-33 '65. (MIRA 18:7)

IVANOV, Sergey Nikolayevich; PENIN, Nikolay Alekseyevich;  
SKVORTKOVA, Nera Yefimovna; SOKOLOV, Yuriy Fedorovich;  
VOLKOVA, I.M., red.

[Physical principles of the operation of superhigh frequency semiconductor diodes] Fizicheskie osnovy raboty poluprovodnikovyykh SVCh diodov. Moskva, Sovetskoe radio, 1965. 190 p. (MIRA 18:7)

MERJIN, I.M., kand. tekhn. nauk, dotsent; STOROZHEV, V.I., inzh.;  
IVANOV, S.N., inzh.

Investigating the rigidity of a six-roll mill for cold rolling.  
Izv. vys. ucheb. zav.; mashinostr. no.6:153-159 '65.  
(MIRA 18:8)

IVANOV, S.N.

A new principle of establishing phosphorus-potassium requirements  
of plants on turf-Podzolic soils. Dokl. AN BSSR 8 no.11:747-751  
N '64. (MIRA 18:3)

USSR/Medicine, Veterinary - Infectious Diseases

Diseases

Jun 52

"Aluminum Hydroxide Formal Vaccine Against Infectious Pleuropneumonia of Goats," P. S. Polkovnikova, S. P. Ivanov, I. I. Smirnov, Laureates of Stalin Prize

"Veterinariya" No 6, pp 20-23

PA 228740  
 Authors quote statistics showing that infectious pleuropneumonia is a leading disease of goats, causing a greater loss of these animals than other epizootics. In an effort to remedy this situation authors obtained laboratory strains of the virus from goats, developed a method of preserving the potency of the virus by passing it through receptive animals after a planned contamination, and claim to have obtained a 100% efficient vaccine. They describe the prepn of the aluminum hydroxide formal vaccine by an adsorption of the specific virus on an inorganic colloid followed by inactivation of the virus with the min amt of formalin needed. The components of this vaccine are: aluminum Hydroxide, phosphate buffer soln (ph = 8.34) virulent matter, and formalin. Authors consider this vaccine a harmless blo-prepn rapidly producing a persistent immunity, effective (2)

228740

in animals for a period of no less than a yr. Vaccination with this prepn is expected to create a wide belt of animals immunized to infectious pleuropneumonia, and eliminate epizootics of this disease. Work on this vaccine was based on experience acquired in the prepn of similar vaccines against smallpox of sheep, foot-and-mouth disease, and the pseudo-pest of fowl.

IVANOV, S. P.

(3)

228740



MERKIN, Isaak Bentsianovich; SOLOV'YEV, Nikolay Dmitriyevich;  
KHOKHLOV, Igor' Ivanovich [deceased]; IVANOV, S.P., kand.  
tekhn. nauk, retsenzent; SOKOLOVA, V.Ye., red.; TRISHINA,  
L.A., tekhn. red.

[Linting of cottonseeds] Linterovanie khlopkovykh semian.  
Moskva, Gizlegprom, 1963. 268 p. (MIRA 16:9)  
(Linters) (Cottonseed)

IVANOV, S.P.

Basic principles of and prospects for the engineering of stereo-  
scopic. Trudy NIKFI no.7:252-259 '47. (MIRA 11:6)

1. Laboratoriya stereokino Nauchno-issledovatel'skogo kino-foto-  
instituta, Moskva.  
(Motion pictures, Three-dimensional)

IVANOV, S. P.

On stereoscopic cinematography. Verbatim report of a public lecture. Moskva, Pravda.  
1948. 28 p. (52-25151)

TR780.I 8

1. Photography, Stereoscopic. 2. Cinematography.

940621

UNCLASSIFIED

IVANOV, S. P.

O Tavetnoy Stereoskopicheskoy Fotografii. Moscow, 1951. 39 p.

A lecture on color stereophotography including optical-physical basis of stereoscopy, construction of stereocopes, stereophotography, color photography, etc.; published by "Pravda".

1. Russia--Photography.

i. About Color-Stereophotography.

ii. Title.

15

UNCLASSIFIED

IVANOV, S. P.

Die Dreidimensionale Farbfotografie. Berlin, Aufbau, 1954.

47 p. Diags.

Translation from the Russian, "O Tsvetnoy Stereoskopicheskoy Fotografii", Moscow, 1951.

N/5

613.486

.191

IVANOV, S.P.

Checking optical dividing heads. Izv.tekh. 20 no.1:10 Ja  
'59. (MIRA 11:12)

(Optical instruments--Testing)

IVANOV, S. P. AND AKINA, L. V.

(All-Union Scientific-Reserch Institute of Cinematography, Moscow)

Hexagonal Lens Rasters.

report submitted for: The 5th International High Speed Photography Congress,  
Washington, D. C. 16-22 Oct., 1960.

C

IVANOV, S.P., KOROVITSYN, V.P., NIKOL'SKIY, I.V., KHRUSHCHEV, A.T.

Comprehensive studies of the economic geography of Eastern  
Zazakhstan. Vest. Mosk. un. Ser.5: Geog. 15 no.3:42-47 My -  
Je '60. (MIRA 13:7)

1. Kafedra ekonomicheskoy geografii SSSR Moskovskogo  
universiteta.  
(Kazakhstan--Economic conditions)



KAMAYEV, A.V.; DUBOVSKIY, B.G.; VAVILOV, V.V.; POPOV, G.A.;  
PALAMARCHUK, Yu.D.; IVANOV, S.P.

[Experimental study of the effects of interaction of two  
subcritical reactors] Eksperimental'noe izuchenie ef-  
fektov vzaimodeistviia dvukh podkriticheskikh reaktorov.  
Moskva, Glav. upr. po ispol'zovaniyu atomnoi energii,  
1960. 10 p. (MIRA 17:1)

PHASE I BOOK EXPLOITATION SOV/5337

Panasenko, Ye. I., ed.

Issledeniye kriticheskikh parametrov reaktorov s sistemami sborniki statey (Study of Critical Parameters of Reactor Systems; Collection of Articles) Moscow, Gosatomizdat, 1960. 117 p. Errata slip inserted. 3,600 copies printed.

Tech. Ed.: E.A. Vlasova.

**REFERENCE:** This collection of articles is intended for nuclear physicists and engineers of nuclear power plants.

**COVERAGE:** The book contains previously unpublished original articles concerned with the theoretical calculation of neutron fluxes and of critical parameters (critical masses and volumes) of various reactor systems: uranium-graphite, uranium-beryllium, and water mixtures of uranium and plutonium. Individual articles present tables and graphs used in the determination of the dependence of critical parameters on the relative concentration and the character of the fissionable material and the moderator, as well as on fuel enrichment for a wide range of neutron energy spectra. The following are attached: P.A. Gavrilov (scientific editor of the collection), and G.I. Sokolov, L.M. Spokhova, A. Ya. Ryumina, R.F. Rozhina and V.S. Vladimirov (compilers of Table 1, table of values of coefficients  $k_{eff}$  and  $\gamma$ ). References accompany individual articles.

TABLE OF CONTENTS:

Romanov, Yu. A. Exact Solutions of the Single-Velocity Kinetic Equation and Their Use in Solving Diffusion Problems (the Permitted Diffusion Method)	3
Marchuk, G.I., and V.P. Kochergin. The Approximation Method of Calculating the Critical Masses of Reactors With an Infinite Reflector	27
Rumyantsev, G. Ya. The Use of Even Approximations in the Method of Hyperbolic Harmonics	34
Marchuk, G.I., G.A. Elyasova, V. Ye. Kolesov, V.P. Kochergin, L.I. Kuznetsov, and Ye. I. Popudalica. Critical Masses of Uranium-Graphite Reactors	39
Marchuk, G.I., G.A. Elyasova, V. Ye. Kolesov, V.P. Kochergin, L.I. Kuznetsov, and Ye. I. Popudalica. Critical Masses of Uranium-Beryllium Reactors	52
Marchuk, G.I., G.A. Elyasova, V. Ye. Kolesov, V.P. Kochergin, L.I. Kuznetsov, and Ye. I. Popudalica. Critical Masses of Aqueous Mixtures of Compounds of Uranium and Plutonium	57
Zavratov, V.G., Interaction of System of a Fissionable Substance in a Scattering Medium	74
Kasaryov, A.V., B.G. Dobovskiy, V.Y. Pavlov, G.A. Popov, Yu.D. Poludachuk, and S.P. Veprov. Experimental Study of the Interaction Effects of Two Subcritical Reactors	101
Marchuk, G.I., B.G. Dobovskiy, V.V. Smolov, and Z.M. Milyutina. The Design of Sectionalized Nuclear Plants	107

AVAILABILITY: Library of Congress

Card 3/3

JA/aw/mse  
7-59-61

IVANOV, S.P.; KOROVITSYN, V.P.; NIKOL'SKIY, I.V.; KHRUSHCHEV, A.T.

Territorial organization of the construction industry based on  
the study of the Kazakh S.S.R. Geog. i khoz. no.9:34-37 '61.  
(MIRA 14:11)

(Kazakhstan—Construction industry)  
(Kazakhstan—Building materials industry)

IVANOV, S.P.; NIKOL'SKIY, I.V.; KHRUSHCHEV, A.T.

Main problems of the future development of the territorial  
production complex of ~~eastern~~ Kazakhstan. Vop. geog. no.57:  
288-296 '62. (MIRA 15:10)

(Kazakhstan--Industries)

(Kazakhstan--Economic policy)

S/077/63/008/002/002/009  
A066/A126

AUTHORS: Ivanov, S.P., Akimakina, L.V.

TITLE: Peculiarities of integral stereoscopic filming and projection

PERIODICAL: Zhurnal nauchnoy i prikladnoy fotografii i kinematografii, v. 8, no. 2, 1963, 92 - 97

TEXT: A stereocinematograph with a perspective screen and without spectacles has recently been developed at the stereolaboratory of HHKdM (NIKFI). In integral stereoscopic filming and projection, a large number of pictures of the object are taken simultaneously and reproduced on the screen. The number of objectives is determined by the number of pictures in the series, which fix the object from various points simultaneously. The latter differ in very small parallaxes of two close projections of similar-image points. The step in the elementary areas and that of the objectives are chosen commensurably with the diameter of the eye-pupil. The viewing distance is chosen according to the resolving power of the observer's eye. It is almost unnecessary to choose a point of observation for the stereoscopic effect, whereby a "look around" effect of hitherto un-

Card 1/2

Peculiarities of integral stereoscopic ....

8/077/61/008/002/002/009  
A066/A126

attainable quality is achieved. There are 4 figures and 1 table.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy kinofotoinstitut (NIKFI) (All-Union Scientific Research Institute of Motion Picture Photography)

SUBMITTED: September 15, 1961

Card 2/2

AKIMAKINA, L.V.; BUDKOVA, M.A.; IVANOV, S.P.; IVCHENKO, D.F.

Comparative study of the British "Series 600" and camera  
manufactured by Thompson and the Soviet "Renaissance"  
Usp.nauch.fot. 9:29-32 '64.

(MIRA 18:01)

ARIMAKINA, L.V.; IVANOV, S.P.; IVCHENKO, D.F.; SKORODOGATOV, P.K.

Use of OKI-1 cameras for stereoscopic filming with a variable  
basis. Usp.nauch.fot. 9:37-39 1964.

(NIRA 18x11)



ACC NR: AT6024286

SOURCE CODE: UR/2976/66/000/005/0201/0210

AUTHOR: Titov, M. A.; Surkov, L. V.; Ivanov, S. R.

ORG: none

TITLE: The problem of repairability of electronic digital computers

SOURCE: Moscow. Vyssheye tekhnicheskoye uchilishche. Vychislitel'naya tekhnika, no. 5, 1966, 201-210

TOPIC TAGS: system reliability, reliability engineering, computer design, digital computer

ABSTRACT: In the overall digital computer <sup>25</sup>reliability <sup>14</sup>estimates the repairability factors such as the detection, removal, and prevention of failures must be included in the analysis. These in turn do not depend on the computer system organization above, but also on the capability of the maintenance personnel. The design of a computer system with a specific repairability figure is difficult since the statistical data for the new system is not available a priori. The authors make an attempt to correlate certain experience gained during the operation of a Ural-2 computer with the repairability design parameters for inclusion in future designs. Thus, the computer availability time is related to the mean restorability time which in turn is shown to depend on a number of factors: computer functional organization (i.e. whether provisions are made for executing test programs), amount of equipment redundancy and built in control circuitry, location of fault indicators,

Card 1/2

ACC NR: AT6024286

structural organization (i.e. whether the structure is modular and access to measuring and test equipment is easy), organization of maintenance routines and schedules, and the qualification of maintenance personnel. Orig/ art. has: 2 tables.

SUB CODE: 0914/ SUBM DATE: none/ ORIG REF: 004/ OTH REF: 002

Card 2/2

BORISOVSKIY, Ye.S.; KHOSID, G.M.; SPIVAK, G.I.; IVANOV, S.S.; REYNGARDT,  
T.A.

Production and testing of alumina-carborundum inserts for steel  
casting nozzles. Ogneupory 27 no.7:301-305 '62. (MIRA 15:8)

1. Vsesoyuznyy institut ogneporov (for Borisovskiy, Khosid).
2. Vnukovskiy ognepornyy ~~zavod~~ <sup>zavod</sup> (for Spivak, Ivanov, Reyngardt).  
(Refractory materials)  
(Continuous casting—Equipment and supplies)

AUTHOR: Ivanov, S. S. 131. 58-6-10/14

TITLE: Production of Small Styled Products at the  
Kyshtym Works for Refractory Products  
(Proizvodstvo melkoshtuchnykh fasonnykh izdeliy  
na Kyshtymskom ognepornom zavode)

PERIODICAL: Ogneupory, 1958, Nr 6, pp. 282-284 (USSR)

ABSTRACT: The weight of the products ranges between several grams  
and 1.5 kg (see figure). In the organization of this  
production the experience collected at the Vnukovo  
works was made use of. According to the designs by that  
works the production live presses for the production  
of little tubes of a small diameter were produced,  
as well as the presses of the Feshchenko type which  
are percussion and toggle presses for final pressing,  
and roller hearing drying plants for drying little tubes.  
Based on experiments carried out the charge for this  
production was taken from the local kaolinized clay  
of the Kyshtym deposit with addition of the clay from  
Nizhne-Uvel'sk deposit. The chemical composition of

Card 1/2

Production of Small Styled Products at the  
Kyshtym Works for Refractory Products

131.58 -6-10/14

the refractory character of the clays can be seen from the table. The composition of the charge is in %: Kyshtym clay - 50, Nizhne-Uvel'sk clay - 25, chamotte (production wastes) - 25. The small products were produced by the plastic method. The granular composition of the charge was in %: above 3 mm - 0,9 and below 0,54 mm - 66,4. These products were dried on shelves at temperatures of 25 - 35°C and then they were mostly burned in saggers at final temperatures of 1330 - 1350°C. The finished products have a refractoriness of

1690°C, an apparent porosity of 26,8 %, resistance to fracture on pressure of ~ 250 kg/cm<sup>2</sup>. They have an Al<sub>2</sub>O<sub>3</sub> content of 25,9 % and an Fe<sub>2</sub>O<sub>3</sub> content of 2,3 %.

At present 13 t of these products are produced per month. A standardization of their dimensions would be required. There are 1 figure and 1 table.

ASSOCIATION:

Kyshtym'skiy ognepornyy zavod (Kyshtym Works for Refractories)

Card 2/2

1. Refractory materials--Production 2. Refractory materials--Properties 3. Refractory materials--Porosity

IVANOV, S.S.

Dynamic chemical tables. Khim. v shkole 15 no.6:73-75 M-D '69.

(MIRA 13:11)

1. Pedagogicheskiy institut im. S.M.Kirova, Pskov.  
(Chemistry, Technical--Study and teaching)

IVANOV, S.S., inzh.

Motion of a harvester around a turn. Mekh. i elek. sots. sel'khoz.  
20 no.1:43-44 '62. (MIRA 15:2)

1. Penzenskiy sel'skokhozyaystvennyy institut.  
(Harvesting machinery)

IVANOV, S.S.

Kinematics of harvesters. Trakt. i sel'khoz mash. 32 no. 6:17-20  
Je 162. (MIRA 15:6)

1. Penzenskiy sel'skokhozyaystvennyy institut.  
(Harvesting machinery)



KLOCHKOV, B.V., inzh.; KORYAKOV, V.P., inzh.; IVANOV, S.S., inzh.

The concrete reinforcement worker I.A. Viver and his brigade  
of communist labor. Transp. stroi. 12 no.9:7-8 S '62. (MIRA 16:2)  
(Reinforced concrete)

IVANOV, S.S., kand. tekhn. nauk, red.; KLIMOVA, Ye.G., tekhn.  
red.

[Abstracts of scientific research papers for the year  
1961] Annotatsii nauchno-issledovatel'skikh rabot za 1961  
god. Moskva, 1962. 137 p. (MIRA 16:10)

1. Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut  
khlopchatobumazhnoy promyshlennosti.  
(Cotton manufacture--Research)

Ivanov, S.S.

more obtained in the reaction between

hydroxylates,

AUTHORS:

*I V A N O V, S. S.*  
Ushakov, S.N., Ivanov, S.S.

52-12-6/20

TITLE:

On the Co-Polymerization of Divinyl With Vinyl Formiate  
(O sopolimerizatsii diviniila s vinilformiatom).

PERIODICAL:

Izvestiya AN SSSR Otdeleniye Khimicheskikh Nauk, 1957, Nr 12,  
pp. 1465-1471 (USSR)

ABSTRACT:

The co-polymerization of divinyl with complicated vinyl ethers is of interest because of the possibility thus arising of modifying the properties of vinyl polymers. Because of the low velocities of co-polymerization reaction in the medium of hydrocarbon, and in view of the possibility of hydrolysis in emulsion, it has hitherto been considered impossible to obtain divinyl co-polymers with complicated vinyl ethers. In this paper the authors speak about co-polymerization, which has hitherto not been described in publications dealing with this field. The conditions of the co-polymerization of these monomers in the mass in the presence of the oxidation regeneration system (okislitel'novosstanovitel'naya sistema) is described. The influence exercised by the nature of the radical (bound to iron) upon the velocity of co-polymerization and the yield of co-polymers was described. The use of iron stearate (instead of naphtenate) increases the degree

Card 1/2

On the Co-Polymerization of Divinyl With Vinyl Formiate

62-12-6/20

of conversion nearly five-fold. In the fractionation of the co-polymer the fractions are distinguished by their molecular weight and not by their chemical structure. Furthermore, the possibility of the saponification of the formyl groups of the co-polymer was found to exist, and the influence exercised by the free hydroxyl groups upon some properties of the polymers obtained is described. Finally, the constants of the co-polymerization of divinyl with vinyl formiate was uniquely determined. There are 6 tables, and 15 references, 9 of which are Slavic.

ASSOCIATION: Institute for High-Molecular Compounds AN USSR (Institut vysokomolekulyarnykh soyedineniy Akademii nauk SSSR).

SUBMITTED: July 9. 1956

AVAILABLE: Library of Congress

Card 2/2 1. Divinyl-Co-Polymerization 2. Vinyl-Co-Polymerization

IVANOV, S. S.

AUTHORS: Ivanov, S. S. , Koton, M. M.

79-1-29/63

TITLE: The Synthesis, Properties and Polymerization of  $\alpha$ -Chloracrylamide (Sintez, svoystva i polimerizatsiya  $\alpha$ -khloraakrilamida)

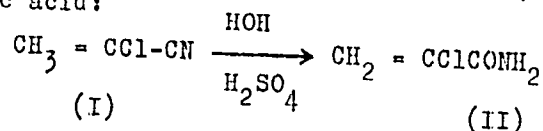
PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 1, pp. 139-143 (USSR)

ABSTRACT: The amides of some acrylic acids can generally be synthesized by the influence of an aqueous ammonia solution upon the corresponding esters. In this manner Arcus (reference 1) obtained methacrylamide with a good yield by an excess of concentrated ammonia on a cold way. The synthesis of  $\alpha$ -chloracrylamide could, however, not be realized by this method, because simultaneously with the exchange of the methoxyl group for the amido group a splitting off of chlorine takes place. The authors of the only French patent indicate the possibility to obtain  $\alpha$ -chloracrylamide by saponification of  $\alpha$ -chloracrylonitrile with sulfuric acid. But it is not described there either how it might be possible to obtain this product from the reaction mixture in a pure state. More-

Card 1/3

The Synthesis, Properties and Polymerization of  $\alpha$ -Chloracrylamide 79-1-29/63

over no exact characteristic properties are given beside the melting point ( $93^{\circ}\text{C}$ ). For the purpose of investigating its capability of polymerization the authors also synthesized  $\alpha$ -chloracrylamide of  $\alpha$ -chloracrylnitrile (formula (I)) with sulfuric acid:



$\alpha$ -chloracrylnitrile was produced by dehydrochlorination of  $\alpha$ - $\beta$ -dichloropropionitrile with sodium acetate and  $\alpha$ , $\beta$ -dichloropropionitrile by chlorination of acrylnitrile in the presence of pyridine. Some properties of  $\alpha$ -chloracrylamide and its polymers were characterized. It was shown that under the influence of a concentrated ammonia solution upon  $\alpha$ -chloracrylamide at room temperature the reaction takes place under a splitting off of chlorine and the formation of a low-molecular polymer. The polymerization of  $\alpha$ -chloracrylamide takes place under the separation of nitrogen and chlorine as well as under the formation of polymers joined in the block

Card 2/3

The Synthesis, Properties and Polymerization of  $\alpha$ -Chloracrylamide 79-1-29/63

and in the benzene solution. In an aqueous solution a partially saponified poly- $\alpha$ -hydroxyacrylamide forms which is soluble in water. There are 2 tables, and 5 references, 2 of which are Slavic.

ASSOCIATION: Institute for High-Molecular Compounds AN USSR  
(Institut vysokomolekulyarnykh soyedineniy Akademii nauk SSSR)

SUBMITTED: January 2, 1957

AVAILABLE: Library of Congress

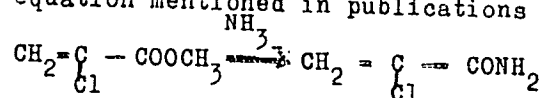
Card 3/3

1. Chemistry 2. Chloracrylamide-Properties 3. Chloracrylamide-Synthesis 4. Chloracrylamide-Polymerization



AUTHORS: Ivanov, S. S., Koton, M. M. 79-28 3-21/61  
 TITLE: The Reaction of Ammonia With Methyl- $\alpha$ -Chloro-  
 Acrylate (O reaktsii vzaimodeystviya ammiaka s metil- $\alpha$ -  
 khlorakrilatom)  
 PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 3, pp. 661-664  
 (USSR)

ABSTRACT: It could have been expected that the reaction of ammonia with  
 $\alpha$ -methyl- $\alpha$ -chloroacrylate would take place according to the follow-  
 ing equation mentioned in publications (ref. 1,2,3):



The experiment to synthesize  $\alpha$ -chloroacrylamide in this way  
 showed, however, that a completely different mechanism of  
 reaction is effective here, and the formation of chloro-  
 acrylamide does not occur in it. The reaction takes place  
 under the splitting off of chlorine in form of ammonium-  
 chloride and substituting the alkoxyradical by the amido

Card 1/3

The Reaction of Ammonia With Methyl- $\alpha$ -Chloro-  
Acrylate

79-28 -3-21/61

group, on which occasion the formed amides polymerize so easily that it was not possible to isolate them from the reaction mixture in the form of monomers. The analysis points at the empiric formula  $(C_3H_5ON)_n$  which, judged by its structure, apparently represents a low-molecular poly- $\alpha$ -hydroxyacrylamide (see formulae where  $n = 2-7$ ). The splitting off of chlorine from methyl- $\alpha$ -chloroacrylate possibly takes place in the reaction with aqueous concentrated, as well as with dry gaseous ammonia at room temperature and temperatures below it (from 0 to 25°C), the final polymer of the aqueous solutions being of one and the same composition regardless of the reaction conditions of ammonia. In the formation of polymerization the inhibitors (hydroquinone) do not play any part. The splitting of chlorine also takes place this way with methyl- $\alpha, \beta$ -dichloropropionate. Instead of the expected  $\alpha, \beta$  dichloropropionamide a low-molecular polymer separates in both cases which is of the same composition as in the reaction of ammonia on methyl- $\alpha$ -chloroacrylate  $(C_3H_5O_2N)_n$  (see the reaction process

Card 2/3

The Reaction of Ammonia With Methyl- $\alpha$ -Chloro-  
Acrylate

79-28.3-21/61

mentioned). The splitting off of chlorine from  $\alpha$ -chloro-  
acrylates and  $\alpha,\beta$ -dichloropropionates has hitherto not been  
described in publications. Obviously it represents a general  
reaction which is characteristic for the esters of the  
aliphatic acids having one chlorine atom in the  $\alpha,\beta$ -position.  
There are 6 references.

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy Akademii nauk  
SSSR (Institute for High-Molecular Compounds, AS USSR)

SUBMITTED: April 9, 1957

Card 3/3

5 (3)

AUTHOR:

Ivanov, S. S.

SOV/79-29-7-56/83

TITLE:

Synthesis of  $\alpha, \beta$ -Dichloropropionamide (Sintez  $\alpha, \beta$ -dikhlorpropionamida)

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 7, pp 2365 - 2366 (USSR)

ABSTRACT:

E. Klimenko (Ref 1), H. Beckurts (Ref 2), and R. Otto (Ref 3) showed that the reaction of ammonia with halogen-substituted propionates yields the corresponding amides by substitution of the alkoxy residue. Thus, Klimenko (Ref 1) obtained the amide of  $\alpha, \alpha$ -dichloropropionic acid by the action of aqueous ammonia on the ethyl- $\alpha, \alpha$ -dichloropropionate at room temperature. Otto (Ref 3) prepared  $\beta, \beta$ -dichloropropionamide by causing concentrated aqueous ammonia solution to react with ethyl- $\beta, \beta$ -dichloropropionate at low temperature. However, the  $\alpha, \beta$ -dichloropropionamide has not yet been described in publications. As reported previously by the author (Ref 4), methyl- $\alpha, \beta$ -dichloropropionate and ammonia reacted at room temperature and lower (up to 25°), and gave, instead of the expected  $\alpha, \beta$ -dichloropropionamide, a polymer  $(C_3H_5O_2N)_n$  of low molecular weight, separating the

Card 1/2

Synthesis of  $\alpha,\beta$ -Dichloropropionamide

SOV/79-29-7-56/83

chlorine, which was eliminated as ammonium chloride. The  $\alpha,\beta$ -dichloropropionamide was prepared by the author by saponification of  $\alpha,\beta$ -dichloropropionitrile with concentrated sulfuric acid (experimental part). There are 1 table and 6 references, 2 of which are Soviet.

ASSOCIATION: Institut vysokomolekulyarnykh soedineniy Akademii nauk SSSR  
(Institute of High-Molecular Compounds of the Academy of Sciences, USSR)

SUBMITTED: June 14, 1958

Card 2/2

IVANOV, S.S.; KOTON, M.M.

Polymerization of  $\alpha$ -acylaminoacrylic acids. Vysokom. soed, 3  
no.2:248-254 F '61. (MIRA 14:5)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.  
(Acrylic acid)  
(Polymerization)

15-8105

89987

S/190/61/003/003/002/014  
B101/B204

AUTHOR: Ivanov, S. S.

TITLE: Synthesis and polymerization of methyl- $\alpha$ -methoxyacrylate

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 3, 1961,  
368-370

TEXT: The author deals with the problem of the dependence of the properties of polymers on their structure. Such an investigation is easily carried out by comparing the properties of various  $\alpha$ -derivatives of acrylic acid. The polymerization of some of these derivatives has been but little studied, including that of methyl- $\alpha$ -methoxyacrylate, for whose synthesis only few data may be found in publications. For the purpose of studying its polymerization it was synthesized, according to W. Baker (Ref. 3: J. Chem. Soc., 1942, 520) and according to L. Claisen (Ref. 2: Ber. 29, 1006, 1896; ibid. 31, 1020, 1898). 1) Synthesis according to Baker. From paraldehyde, methanol, and anhydrous HCl, and by cooling with ice and sodium chloride, methyl- $\alpha$ -chloroethyl ether was produced (yield 76%). The latter was converted at 0°C by anhydrous bromine into methyl-

Card 1/4

89987

Synthesis and polymerization of...

S/190/61/003/003/002/014

B101/B204

$\alpha, \beta$ -dibromine ethyl ether (yield 81.7%). The ethereal solution of this ether was treated with copper cyanide under ice cooling, and  $\beta$ -bromine- $\alpha$ -methoxypropionitrile was obtained (yield 37%). From the latter, the hydrochloride of imino ether was obtained at  $-10^{\circ}\text{C}$  with anhydrous methanol and  $\text{HCl}$ :  $\text{BrCH}_2\text{CH}(\text{OCH}_3)\text{C}(\text{OCH}_3)=\text{NH}\cdot\text{HCl}$ , which was decomposed at  $0^{\circ}\text{C}$  by adding ice to methyl- $\beta$ -bromine- $\alpha$ -methoxypropionate (yield 36.2%). To the latter, freshly distilled piperidine was added in drops at  $0^{\circ}\text{C}$  in the presence of hydroquinone, and methyl- $\alpha$ -methoxyacrylate was obtained (yield 57.5%). 2) Synthesis according to Claisen. From the methylester of pyrotartaric acid and methylester of orthoformic acid, both dissolved in absolute methanol containing ammonium chloride, methyl- $\alpha, \alpha$ -di-methoxypropionate was synthesized in an oil bath (yield 97.2%), and by means of  $\text{P}_2\text{O}_5$ , methyl- $\alpha$ -methoxyacrylate was obtained (yield 57.8%). This compound was polymerized in nitrogen atmosphere in the presence of 2% benzoyl peroxide or in azoisobutyric acid dinitrile for 30 hr at  $60^{\circ}\text{C}$ . The polymer was vitriform, soluble in acetone, benzene, and dimethyl formamide, and was precipitated by ether. The yield, when using benzoyl peroxide was 98.7%, when using azoisobutyric acid dinitrile it was 96.2%. In Table 1, the electric properties of this polymer at  $20^{\circ}\text{C}$  are compared with Card 2/4



89987

Synthesis and polymerization of...

S/190/61/003/003/002/014  
B101/B204

those of polymethyl- $\alpha$ -chloroacrylate. The heat resistance was tested by determining the loss in weight during heating. In % of the initial weight the following values were obtained: at 100°C 96.5; at 150°C 83.8; at 175°C 34.8; at 225°C 27.7. There are 1 figure, 2 tables, and 6 references: 1 Soviet-bloc and 5 non-Soviet-bloc. Of the two references to English-language publications one is mentioned in the text, the other reads as follows: C. Schildknecht, Vinyl and related polymers, N.Y., 1952, p. 234.

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy AN SSSR  
(Institute of High Molecular Compounds, AS USSR)

SUBMITTED: June 29, 1960

Card 3/4

89987

Synthesis and polymerization of...

S/190/61/003/003/002/014

B101/B204

Таблица 1  
Физические свойства полиметил-α-метоксакрилата

1) Полимер	2) $\eta = 10^4 \frac{\text{сгс}}{\text{г}}$			3) Тепло-стойкость по Вина, °C	4) Характе-ристиче-ская вяз-кость ( $\eta$ )
	$\eta_{\text{сп}}$	$\eta_{\text{вн}}$	$\rho_{\text{в}}$		
5) Полиметил-α-метоксакрилат	0,0025	3,1	$5,9 \cdot 10^{14}$	97	0,28
6) Полиметил-α-хлоракрилат	0,0022	3,25	$1,9 \cdot 10^{13}$	127	—

Legend to Table 1: 1) Polymer; 2) cps; 3) Heat resistance according to Vicat; 4) Intrinsic viscosity in benzene; 5) Polymethyl-α-methoxyacrylate; 6) Polymethyl-α-chloroacrylate.

Card 4/4

L 15607-63 EPR/EWP(j)/EPF(c)/EWT(m)/BDS ASD Pa-4/Pr-4/Pc-4 RM/WW  
 ACCESSION NR: AP3004700 3/0190/43/005/008/1140/1143

AUTHOR: Ivanov, S. S. 7/

TITLE: Polymerization of alpha-chloroacetylaminoacrylic acid (alpha-chloroacetyl-  
 dehydroalanine) 68

SOURCE: Vyssokomolekulyarnyye soyedineniya, v. 5, no. 8, 1963, 1140-1143

TOPIC TAGS: polymerization, alpha-acetylaminoacrylic acid, pyruvic acid, acyl  
 radical chlorination

ABSTRACT: The polymerization of a 30% alpha-chloroacetylaminoacrylic acid  
 (CAAAA) solution in dimethylformamide in the presence of 0.3% azobisisobutyroni-  
 trile as initiator was conducted in nitrogen-filled ampules at 50-80C for 100-  
 300 minutes. The polymer was precipitated by ether in the form of a white  
 fibrous mass, washed with acetone, then dried to constant weight at room temper-  
 ature. It was found that with an increase in temperature from 50 to 60C the  
 yield of the polymer rose from 20% to 40%. An extension of the heating period  
 from 100 to 200 minutes brought about a 20% higher yield. Comparative exper-  
 iments with alpha-acetylaminoacrylic acid (AAAA) showed much lower activity of the

Card 1/2

L 15607-63

ACCESSION NR: AP3004700

3  
polymerization reaction as compared with CAAAA. The thermostability of the CAAAA and AAAA polymers was studied at a temperature range of 100-300C, which resulted at 200C in a 35% loss in weight for the CAAAA and an 80% loss for the AAAA compounds, the residual CAAAA product being also substantially lower in chlorine. I. M. Stasenkov participated in the experimental work. Thanks are given to M. M. Koton for his interest in the work and his discussion of results. Orig. art. has: 2 charts.

ASSOCIATION: Institut vyssokomolekulyarnykh soyedineniy AN SSSR (Institute of High-molecular Compounds, Academy of Sciences, SSSR)

SUBMITTED: 21Dec61

DATE ACQ: 28Aug63

ENCL: 00

SUB CODE: CH

NO REF SOV: 002

OTHER: 002

Card 2/2

L 18543-63

EPR/EWP(j)/EPF(c)/EWT(m)/BDS/ES(s)-2 AFTTC/ASD/SSD Ps-4/

Pc-4/Pr-4/Pt-4 RM/WW/MAY

ACCESSION NR: AP3006766

S/0190/63/CO5/009/1411/1416

AUTHORS: Ivanov, S. S.; Nadezhdina, L. B.; Stasenкова, I. M.TITLE: Polymerization of the methyl ester and amide of alpha-acetylaminoacrylic acid

SOURCE: Vy\*sokomolekulyarny\*ye soyedineniya, v. 5, no. 9, 1963, 1411-1416

TOPIC TAGS: polymerization, aminoacrylic acid, potassium persulfate, hydrogen peroxide, thermal destruction

ABSTRACT: Polymerization of the methyl ester (MEAA) and amide (AAA) of alpha-acetylaminoacrylic acid was conducted in sealed ampules in an atmosphere of nitrogen in the presence of 0.3% of initiator. MEAA was polymerized in block and in dimethylformamide solution (30%), using azobisisobutyronitrile as initiator, at 70 and 80C for a period of 20 and 48 hours, respectively. Aqueous 4% and 20% solutions of MEAA were polymerized at 60C in the presence of potassium persulfate. The polymerization of AAA was conducted in a 4% aqueous solution in the presence of potassium persulfate or hydrogen peroxide, under identical conditions. The MEAA polymer was a white powder, with a melting point of 315-320C, soluble in water, alcohols and chloroform, while the AAA polymer was in the form

Card 1/2

L 18543-63

ACCESSION NR: AP3006766

3  
of white fibrous flocks and was water soluble, with only swelling in alcohols and chloroform. While MEAA polymerization in aqueous solution yielded within 1.5-3.5 hours a product of 1.2-1.3 characteristic viscosity, it took 20 and 48 hours for the same monomer to attain respective viscosities of 0.51 (in dimethylformamide solution) and 0.7 (in block). The kinetics of MEAA and AAA polymerization were determined by the dilatometric technique, and the activation energy for MEAA was calculated at 15.0 Kkal/mol. A 2-hour thermal destruction of the MEAA and AAA polymers was conducted within a 100-300C range. This yielded for MEAA nearly 70% of a residual product enriched in nitrogen, but for AAA only 30% of a nitrogen-poorer residue. Thanks are given to M. M. Koton for assistance in the work and participation in discussion of results. Orig. art. has: 1 formula, 2 charts, and 3 tables.

ASSOCIATION: Institut vy\*sokomolekulyarny\*kh soyedineniy AN SSSR (Institute of High-Molecular Polymers, Academy of Sciences, SSSR)

SUBMITTED: 12Mar62

DATE ACQ: 30Sep63

ENCL: 00

SUB CODE: CH

NO REF SOV: 001

OTHER: 006

Card 2/2

IVANOV, S.S.; NADEZHINA, L.B.; STASENKOVA, I.M.

Polymerization of the methyl ester and amide of  $\alpha$ -acetylaminoacrylic acid. Vysokom.sped. 5 no.9:1411-1416 S '63. (MIRA 17:1)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.

IVANOV, S.

Doctor of Chemical Sciences, 1951.

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3

## PART I. URANIUM-BASE ALLOYS

1. Ivanov, S., Yu. S. Virgil'yev, and S. S. Ivanov. Solubility of Aluminum, Silicon, Iron, and Nickel in  $\gamma$ -,  $\beta$ -, and  $\alpha$ -phases of Uranium 5
2. Astanova, Z. V., and O. S. Ivanov. Uranium Corner of the Phase Diagram of the Uranium-Aluminum-Silicon System 9
3. Khakimova, D. K., O. S. Ivanov, and Yu. S. Virgil'yev. Uranium Corner of the Phase Diagram of the Uranium-Aluminum-Iron System 16
4. Semenchikov, A. T., and O. S. Ivanov. Effect of Alloying on Preservation of  $\beta$ -Phase Uranium by Quenching 22

Page 2/20



L 22749-66 EWT(m)/EWD(j)/T RM  
ACC NR: AP601.0110 (A)

SOURCE CODE: UR/0190/66/008/003/0470/0475

AUTHORS: Ivanov, S. S.; Gavryuchenkova, L. P.; Keton, N. M.

ORG: Institute of Chemistry of High-Molecular Compounds, AN SSSR  
(Institut vysokomolekulyanykh soyedineniy AN SSSR)

TITLE: Synthesis of polychelates based on poly- $\alpha$ -acetyldehydroalanines

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 3, 1966, 470-475

TOPIC TAGS: polyamide, alanine, chelate compound, polymer, chain  
polymer, ion interaction, glycine, nickel, cobalt, iron, zinc, copper,  
heat resistance

ABSTRACT: Certain properties of polychelates are described. Poly- $\alpha$ -acetyldehydroalanine and poly- $\alpha$ -chloroacetyldehydroalanine are the carbochain analogs of  $\alpha$ -alanine. They were used as chelate ligands. By interaction with the ions of bivalent metal ions of Cu, Co, Ni, Fe, and Zn, the polychelates having side five-membered chelate rings of structure analogous to glycine complexes were prepared. The thermo-degradation analysis shows that the heat resistance of polychelates is higher than that of initial polymers and that it depends on both the nature of the metal and the chelating ligand. The authors thank

Card 1/2

UDC: 541.64

L 22749-66

ACC NR: AP6010110

Ye. I. Pokrovskiy for taking the infrared spectrum and L. A. Volkova  
for taking roentgenograms. Orig. art. has: 3 figures and 2 tables. [NT]

SUB CODE: 07, 11/

SUBM DATE: 02Apr65/  
OTH REF: 004/

ORIG REF: 005/

Card 2/2 *over*

IVANOV, S.S., dotsent

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Vestn. rent. i rad. 38 no. 3:75-76 My-Je '63. (MIRA 17:7)

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B. A. H.

IVANOV, SS.

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9-11 Je '54. (MLRA 7:7)

1. Zaveduyushchiy laboratoriyey fabрики in. Frunze (for Levi)

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(Carding machines) (MIRA 8:11)



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(Carding machines)

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(Carding machines—Testing)

IVANOV, S.S., kand. tekhn. nauk, SHELEKHOVA, O.S., starshiy nauchnyy sotrudnik

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(MIRA 13:2)

(Textile research)